

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fibre optic interconnecting devices and passive components – Fibre optic
connector interfaces –
Part 15: Type LSH connector family**

**Dispositifs d'interconnexion et composants passifs à fibres optiques –
Interfaces de connecteurs pour fibres optiques –
Partie 15: Famille de connecteurs de type LSH**



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IEC 61754-15

Edition 2.0 2009-06

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

N

ICS 33.180.20

ISBN 978-2-88912-275-2

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING
DEVICES AND PASSIVE COMPONENTS –
FIBRE OPTIC CONNECTOR INTERFACES –****Part 15: Type LSH connector family**

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International Standard IEC 61754-15 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 1999. The main changes with regard to the previous edition are to reconsider the figures and the dimensions of the interface.

This bilingual version, published in 2010-12, corresponds to the English version.

The text of this standard is based on the following documents:

FDIS	Report on voting
86B/2835/FDIS	86B/2876/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

The French version of this standard has not been voted upon.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 61754 series, under the general title *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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- withdrawn,
- replaced by a revised edition, or
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The contents of the corrigendum of January 2014 have been included in this copy.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –

Part 15: Type LSH connector family

1 Scope

This part of IEC 61754 defines the standard interface dimensions for the type LSH family of connectors.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61755-3 (all parts), *Fibre optic connector optical interface – Part 3: Optical interface*

ISO 8015, *Technical drawings – Fundamental tolerancing principle*

3 Description

The parent connector for the type LSH connector family is a single-position plug connector which is characterized by a 2,5 mm nominal ferrule diameter. It includes a push-click-pull coupling mechanism, which is spring-loaded relative to the ferrule in the direction of the optical axis. The optical alignment mechanism of the connectors is a rigid bore sleeve or a resilient sleeve style.

4 Interfaces

The pages that follow define the standard interfaces for the type LSH connector family.

This standard contains the following standard interfaces:

- Interface 61754-15-1 Simplex plug connector PC-interface
- Interface 61754-15-2 Simplex adaptor interface
- Interface 61754-15-3 Duplex plug connector PC-interface
- Interface 61754-15-4 Duplex adaptor interface
- Interface 61754-15-5 Simplex plug connector interface – APC 8°
- Interface 61754-15-6 Duplex plug connector interface – APC 8°
- Interface 61754-15-7 Active device interface

The following standards are intermateable.

Table 1 – Intermateability between plugs, adaptors and active device

Plugs	Adaptors		Active device
	61754-15-2	61754-15-4	61754-15-7
61754-15-1	Mate	Mate	Mate
61754-15-3	Not mate	Mate	Not mate
61754-15-5	Mate	Mate	Mate
61754-15-6	Not mate	Mate	Not mate

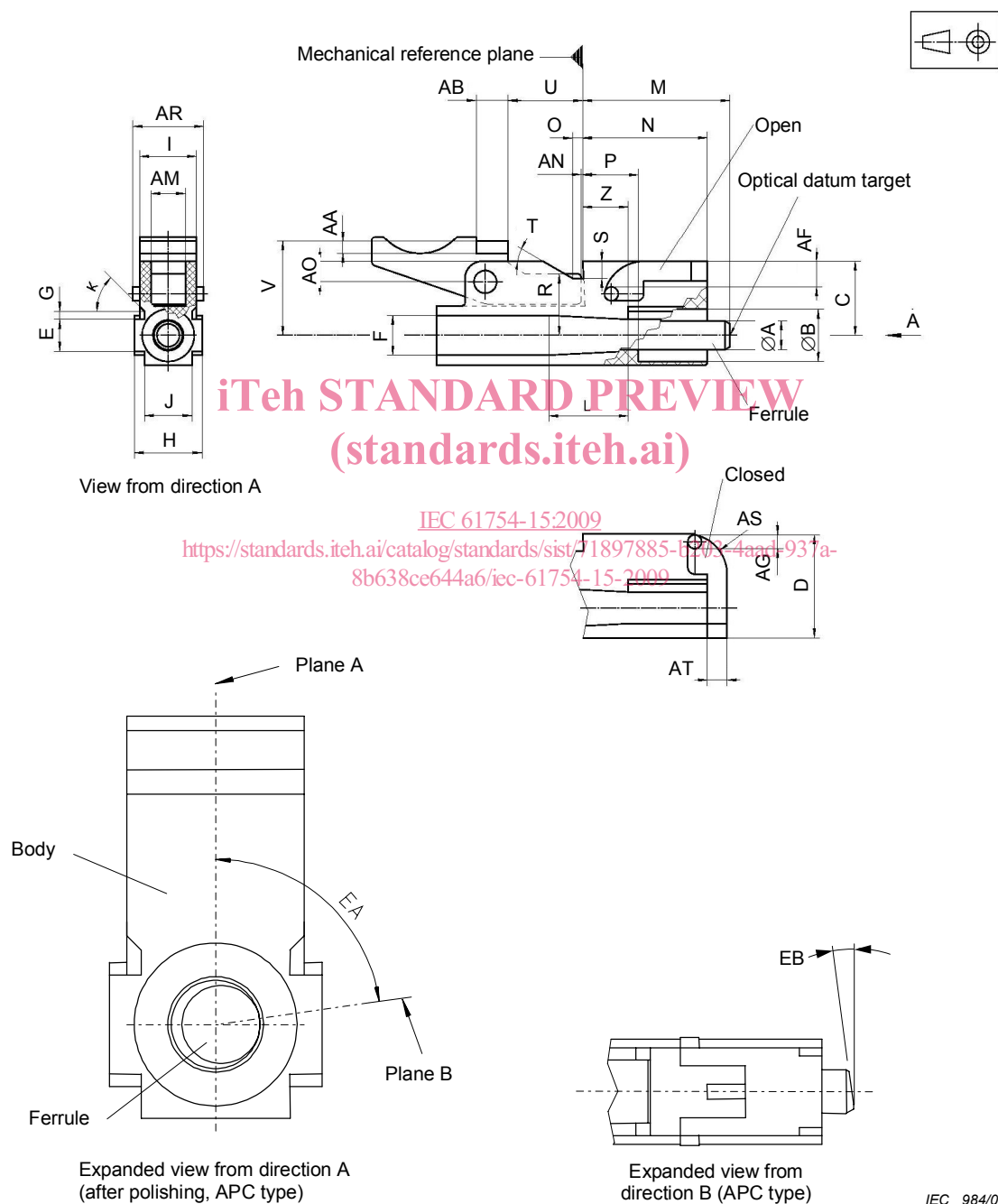


Figure 1 – Simplex plug interface

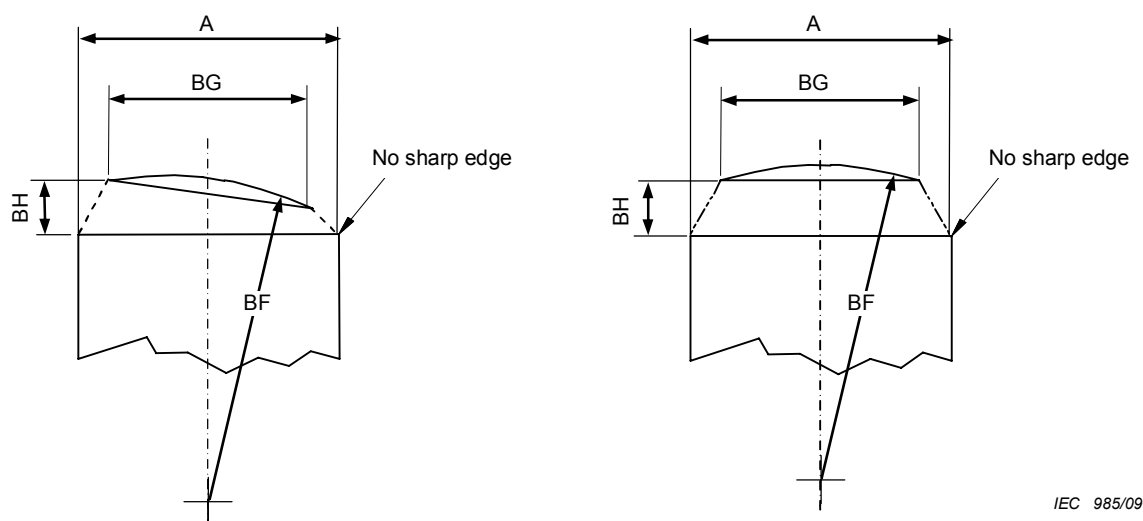


Figure 2 – APC/PC endface geometry

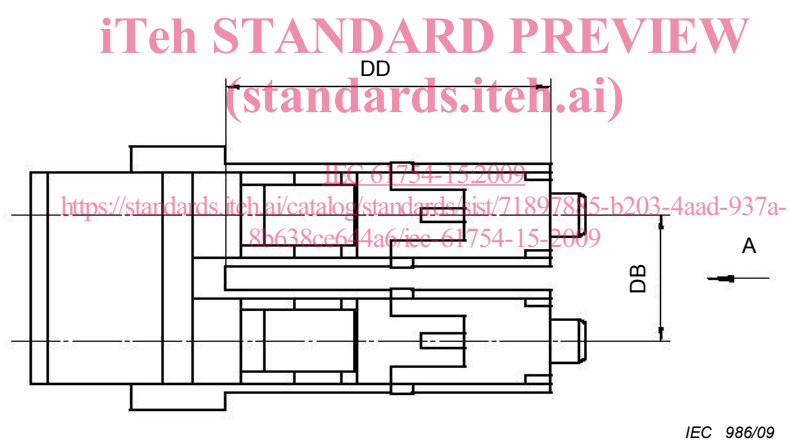


Figure 3 – Duplex plug interface

Table 2 – Dimensions of plug connector interface

Reference	Dimensions			Notes
	Minimum	Basic	Maximum	
A	–		–	1, See Table 3
B	4,45 mm		4,55 mm	Diameter
C	6,25 mm		6,29 mm	
D	8,82 mm		8,9 mm	
E	2,75 mm		2,79 mm	
F	2,95 mm		2,99 mm	
G	0,67 mm		1 mm	
H	5,95 mm		5,98 mm	
I	4,93 mm		4,98 mm	
J	4,13 mm		4,18 mm	
K	45°		60°	Angle in degrees
L	6,1 mm		6,5 mm	
M	12,05 mm		–	2
N	10,9 mm		11,1 mm	
O	0,9 mm		1,5 mm	
P	4,5 mm		5,1 mm	
R	4,9 mm		5,11 mm	
S	1,25 mm		1,35 mm	
T	25°		36°	Angle in degrees
U	6,8 mm		7,2 mm	
V	8,2 mm		8,4 mm	
Z	3,9 mm		4,1 mm	
AA	0,95 mm		–	3
AB	2,5 mm		2,8 mm	3
AF	2,2 mm		2,3 mm	
AG	1,15 mm		1,2 mm	
AM	3 mm		3,2 mm	
AN	0,1 mm		0,3 mm	
AO	1,5 mm		2 mm	
AR	–		6,2 mm	
AS	2,8 mm		3,5 mm	
AT	1,65 mm		1,8 mm	
BF	5 mm		–	Radius, 4
BG	0,8 mm		–	Pedestal diameter
BH	–		1,8 mm	
EA	–	90°	–	Angle in degrees, 5 and 6
EB	–	8°	–	Angle in degrees, 6
DB	7,35 mm		7,45 mm	Float
DD	18,2 mm		19 mm	

Table 2 (continued)

NOTE 1 A chamfer or radius is allowed to a maximum depth of 1 mm from the ferrule endface.

NOTE 2 Dimension M is given for plug endface when not mated. It is movable by a certain axial compression force, with direct contacting endfaces, and therefore dimension M is variable. Ferrule compression force should be 7,8 N to 11,8 N when the dimension M is 11,9 mm to 12 mm.

NOTE 3 AA and AB correspond to a mechanical codification.

NOTE 4 See the IEC 61755-3 series.

NOTE 5 Dimension EA is defined as an angle between two planes: one plane, plane A, passes through the axis of the ferrule and the axis of symmetry of the body of the angled endface connector plug. The other plane, plane B, passes through the axis of the ferrule and the normal to the tangent plane at the axis of the ferrule endface.

NOTE 6 Only for APC version.

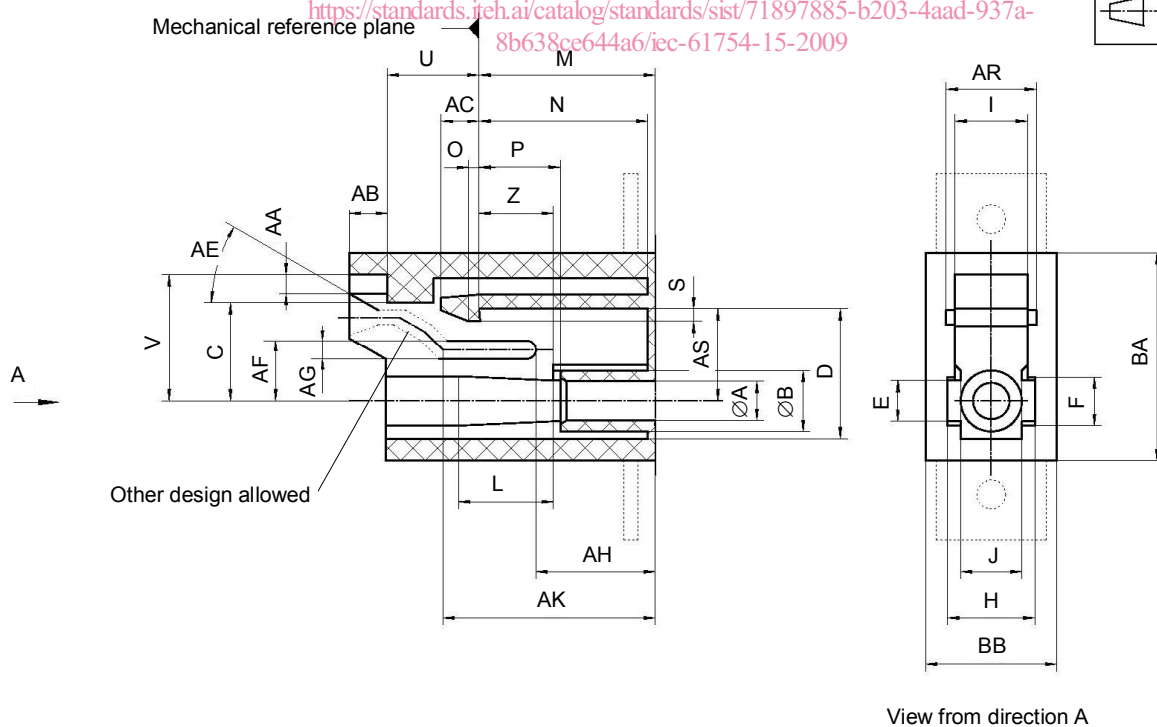
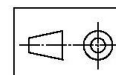
Table 3 – Ferrule grade table for plug connector interface

Grade	A	
	Minimum	Maximum
0	2,499 0 mm	2,499 5 mm
1	2,498 5 mm	2,499 5 mm
2	2,498 3 mm	2,499 5 mm

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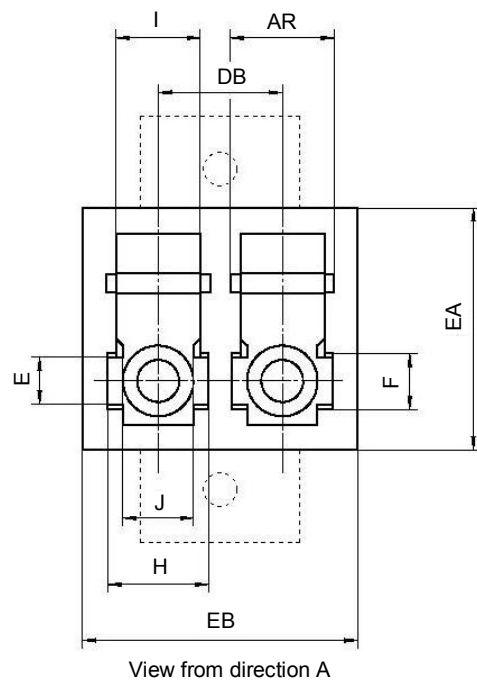
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IEC 987/09

Figure 4a – Simplex adaptor interface with optional adaptor flanges



IEC 988/09

Figure 4b – Duplex adaptor interface with optional adaptor flanges

Figure 4 – Different types of adaptor interface with optional adaptor flanges

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